October-23-12	2:40:50 PM			9//	.507						Page
Item ID: Revision ID:	647.1915	A) 12.14	2.17	Accept	*N900	040	100	)*	Setup Start	1/1	S1*
Item Name:	Support Angle	8.00				•			Stop	*N:	S2*
Start Date: Required,Date Reference:	23/10/2012 : 06/11/2012	Start Qty: 6.00 Req'd Qty: 6.00	*6*		Cust Item I Customer:	D:					
Approvals:	Process Plan	1: MUJ	Date: 12-10-2	4. Tooling:	D:	ate:	-	F	Run Start	" <b> </b> V	R1*
	QC:		•		D:	ate:			" Stop	*N	R2*
Sequence ID/ Work Center I		Operation Description		Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
Draw Nbr	Revi	sion Nbr					· · · · · · · · · · · · · · · · ·				
647.7300											
*110* Mill Conv Conventional Millin	ng Machina	HAAS CNC VERTICA  Memo  1-Machine		0.00	-12-17			9	2		
Conventional Minn	ig Machine	DWG REV		*			·				
•		2- deburr a	nd break all sharp edges	; . ×	*				٠	,	
120 *120*		QC2- Inspect parts off r	nachine FAI/FAIB	: ··0.00			•				<b>r</b> '
QC Quality Control		Memo		0.00	12-12-18	·		7—			

											DQA:	Date:	-
NCR:	⁄es	/ No				WORK ORDER NON-C	O	NFOR	MANCE / UP	DATE			· · ·
											QA Closed:	Date:	
Work Orde	er:					DISPOSITION				AGAINST DE	PARTMENT	/PROCESS	
Work Orac	-				<del></del>	Rework	1		Skid-tube	Crosstube		Water Jet	Engineering
Part N	lo.					Scrap			Machining	Small Fab	Pro	d. Eng. Coor.	Quality
	-					Use-as-is			noforming	Finishing		e/Packaging	Other
NCR N	lo.					Work Order Update			Large Fab	Composite	,	Supplier	
							1		• Ш	• •	•		
Root					Descri	ption of work order update	Ī	nitial	Ac	tion	Sign &		
Cause		Date	Step	Qty	(	or Non-conformance	Ch	ief Eng	Desc	ription	Date	Verification	QC Inspector
Doc/Data													
Equip/Tooling													
Operator													
Material													
Setup									:				
Other											]		

## Unapproved **FAULT CATEGORY Landing Gear** General Pressure/Forced Bend Grain Ovalized Bending BOM/Route Temperature/Cure Centre Not Concentric to O/S Over/Under tolerance Hardware Cracks Broken/Damaged Inspection Incomplete Weld Part Incorrect Wrong Stock Pulled Crushed/Crimped. Burrs Instructions Incomplete/Unclear Part Lost/Missing Cuffs Contamination Maintenance Part Moved Countersink Mislabeled Positioned Wrong Heat Treat Other Inspection Strip in Tube Misread Power Loss/Surge **Cut Too Short** Ripples in Bend Drill Holes Offset Out of Calibration Torque Waves in Extrusion Drawing Turning Sequence Finish Out of Sequence Wave/Twist in Tube Folio Outside Dimensions

H:/FORMS/Quality Assurance\approved QA/NCRWO Rev G

Process Supplier Training \*92230\*

Page 2

October-23-12 2:40:50 PM Item ID: 647.1915 Accept \*N900040100\* Setup Start **Revision ID:** Item Name: Support Angle Start Qty: 6.00 Start Date: 23/10/2012 **Cust Item ID: Required Date:** 06/11/2012 Req'd Qty: 6.00 **Customer:** Reference: Run Start Process Plan: \_\_\_\_\_ Date: \_\_\_\_ Approvals: Tooling: Date: Stop Date: OC: SPC (Y/N): Date: Sequence ID/ Operation Set Up/ Tool ID Reject Reject Tool # Plan Accept Insp. **Work Center ID** Description Run Hours Code Qty Oty Number Stamp 130 QC8- Inspect parts - second check 0.00 one 12/12/19 \*130\* QC 0.00 Memo Quality Control 140 Outsource process-Anodize per QSI017 4.1.10.1 0.00 CZ 12/02/04 \*140\* Outsource4 0.00 Memo Issue P/O: 19017 Black Anodize as per Dwg 646.3800 Outsource process - Anodize 150 Receive & Inspect for Damage & Mat'l Certs 0.00 \*150\* Packaging 0.00 Memo Packaging

NCR: Yes / No	WORK ORDER NON-CO	•	DQA:	Date: _ Date:	
Work Order:	DISPOSITION	AGAINST DE			
Part No.	Rework Scrap Use-as-is	Skid-tube Crosstube  Machining Small Fab  Thermoforming Finishing	l	Water Jet d. Eng. Coor.	Engineering Quality Other
NCR No.	Work Order Update	Large Fab Composite		Supplier	
Root	Description of work order update	Initial Action	Sign &		

Cause	Date	Step	Qty	or Non-conforman	ce Chief Eng	Description	Date	Verification	QC Inspector
Doc/Data						,			,
Equip/Tooling	]								
Operator	]	<u> </u>							
Material						•			
Setup	]	ļ							
Other	<u> </u>								
Process	<u> </u>						ļ		
Supplier									
Training							:		
Unapproved									
					FAULT CATE	GORY			
Landing	Gear			General		•			3
	Bending			Bend	Grain		Ovalized		Pressure/Forced
	Centre No	ot Concer	ntric to	O/S BOM/Route	Hardwa	re	Over/Under	tolerance	Temperature/Cure
	Cracks			Broken/Damaged	Inspecti	ion Incomplete	Part Incorre	ct	Weld
	Crushed/	Crimped.		Burrs	Instruct	ions Incomplete/Unclear	Part Lost/Mi	ssing	Wrong Stock Pulled
	Cuffs			Contamination	Mainte	enance	Part Moved		
	Heat Trea	t		Countersink	Mislabe	eled	Positioned V	Vrong	_
	Inspection	n Strip in	Tube	Cut Too Short	Misread	d	Power Loss/	Surge	Other
	Ripples in	Bend		Drill Holes	Offset				
	Torque W	aves in E	xtrusio	n Drawing	Out of 0	Calibration			
	Turning So	equence		Finish	Out of S	Sequence			
	Wave/Tw	ist in Tub	e	Folio	Outside	Dimensions			

124204

0.00

0.00

CARDINAL 4860-50 PRIMER BATCH:

QC14- Inspect Spray Paint

Memo

170

QC

\*170\*

Quality Control

NCR: Y	· · · · · · · · · · · · · · · · · · ·												
<del></del>										QA Closed:	Date	:	
Work Orde	r:				DISPOSITION				AGAINST DE	PARTMENT,	PROCESS	· .	
Part N	o				Rework Scrap Use-as-is		1	Skid-tube Machining oforming	Crosstube Small Fab Finishing	-	Water Jet d. Eng. Coor. re/Packaging	Engineering Quality Other	
NCR N	0			-	Work Order Update Large Fab Composite Supplier								
Root				Desc	scription of work order update	In	itial	Act	tion	Sign &	· · ·		
Cause	Date	Step	Qty		or Non-conformance	Chie	ef Eng	Descr	ription	Date	Verification	QC Inspector	
oc/Data quip/Tooling perator Material etup other rocess upplier raining napproved						***							
		<del>1</del>				FAULT	CATE	GORY	-		•		
Landin	g Gear				General						-		
,	Bending Centre No Cracks Crushed/ Cuffs Heat Trea Inspectio Ripples in Torque W	Crimped. at n Strip in Bend /aves in E	Tube	-	Bend BOM/Route Broken/Damaged Burrs Contamination Countersink Cut Too Short Drill Holes Drawing	H H	nstructi Mainte Mislabel Misread Offset Out of C	on Incomplete ons Incomplete/U nance led alibration	Unclear	Ovalized Over/Under Part Incorred Part Lost/Mi Part Moved Positioned V Power Loss/	ssing Vrong	Pressure/Forced Temperature/Cure Weld Wrong Stock Pulled Other	
	Turning S	eauence		1	Finish	1 10	Out of S	equence					

Outside Dimensions

DQA:

Date:

H:/FORMS/Quality Assurance\approved QA/NCRWO Rev G

Wave/Twist in Tube

Folio

Work Ord		230	*92230*									Page	
Item ID: Revision ID: Item Name:	647.1915 Support Angle			Accept	*N900	<u>040</u>	100	<b>)*</b>	Setup	Start Stop	ı VI	S1* S2*	
Start Date: Required Date: Reference:	23/10/2012 06/11/2012	Start Qty: 6.00 Req'd Qty: 6.00	*6* *6*		Cust Item I Customer:								;
Approvals:	Process Pla	n:	Date:	Tooling: SPC (Y/N):		ate:		F	Run	Start Stop	*N  *N	R1* R2*	
Sequence ID/ Work Center II	)	Operation Description Identify as per dwg & Stoo	k Location: Sty	Set Up/ Run Hours 0.00	Tool ID	Tool #	Plan Code	Accept Qty	Rej Qty		Reject Tamber	Insp. Stamp	- <del>-</del> -
*180* Packaging Packaging		Memo ***IDENTIFY	/ AS PER APICAL MPI	0.00 P-120 BY STAMPING P#	AND REV***					13/	4/8		9

0.00

0.00

QC21- Final Inspection - Work Order Release

Memo

190

\*190\*

Quality Control

13/4/849

of cours

			DQA:	Date:	•
ICR:	Yes / No	WORK ORDER NON-CONFORMANCE / UPDATE	•	- —	

									QA Closed:	Date:			
Work Orde	er:				DISPOSITION			AGAINST DE	PARTMENT	PROCESS			
		****			Rework		Skid-tube	Crosstube	Water Jet		Engineering		
Part N	١٥.				Scrap		Machining	Small Fab	Pro	d. Eng. Coor.	Quality		
					Use-as-is	The	ermoforming	Finishing	Rec/Stor	e/Packaging	Other		
NCR N	10.				Work Order Update		Large Fab	Composite		Supplier			
								<u>.                                    </u>					
Root				Descri	ption of work order update	Initial	Ac	tion	Sign &				
Cause	Date	Step	Qty	(	or Non-conformance	Chief E	ng Desc	ription	Date	Verification	QC Inspector		
Doc/Data													
Equip/Tooling						:							
Operator													
Material						1							
Setup							·						
Other													
Process													
Supplier													
Training													
Unapproved													
					F	AULT CA	TEGORY						
Landir	ng Gear				General								
	Bending				Bend	Grai	n		Ovalized		Pressure/Forced		
	Centre No	ot Concer	ntric to	o/s	BOM/Route	Hard	ware		Over/Under	tolerance	Temperature/Cure		
	Cracks				Broken/Damaged	Inspe	ction Incomplete		Over/Under Part Incorred	it 🚕 🔑 🖳	Weld		
	Crushed/	Crimped.			Burrs	Instr	uctions Incomplete/		Part Lost/Mi	ssing	Wrong Stock Pulled		
	Cuffs				Contamination	Mair	ntenance		Part Moved		_		
	Heat Trea	it			Countersink	Misla	beled		Positioned V	<b>V</b> rong			
Inspection Strip in Tube			Cut Too Short	Misr	ead		Power Loss/	Şurge	Other				
Ripples in Bend			Drill Holes	Offse	et	<del></del>							
Torque Waves in Extrusion				n [	Drawing	Out	of Calibration				•		
Turning Sequence F					Finish	Out of Sequence							
<b></b>					Folio	Outs	Outside Dimensions			•			

## **Picklist Print**

October-23-12 2:40:54 PM

Work Order ID: 92230

\*92230\*

Parent Item:

647.1915

\*647 1915\*

Parent Item Name: Support Angle

**Start Date:** 23/10/2012

**Required Date:** 06/11/2012

Page 1

Start Qty: 6.00

Required Qty: 6.00

Comments:

IPP REV:A NEW ISSUE 12-10-22 JLM VERIFIED:DD

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Qty per Kit	Total Qty	Qty Issued	Date Issued	Status	-
647.1915E		Manufactured	No			- 74 - 74 - 74 - 74 - 74 - 74 - 74 - 74	Each	0.0000		7.894737	,			
*647 1915 Support Angle	F*		9	1666		<del></del>	L		**					

10 12-12-17

11.0

											DQA:	Date:	**
NCR:	Yes	/ No				<b>WORK ORDER NON-</b>	COI	NFORM	MANCE / UP	DATE			•
											QA Closed:	Date:	
Work Ord	er.					DISPOSITION							
WOIR OIG	C1.				<del></del>	Rework	7		Skid-tube	Crosstube	]	Water Jet	Engineering
Part I	No.					Scrap	1		Machining	Small Fab	Pro	d. Eng. Coor.	Quality
						Use-as-is			noforming	Finishing	Rec/Sto	re/Packaging	Other
NCR I	No.					Work Order Update	]		Large Fab	Composite	]	Supplier	
Root		F			Doscri	ption of work order update		Initial	۸۵	tion	Sign &	1	1
Cause		Date	Step	Qty	Į.	or Non-conformance	4	nief Eng		cription	Date	Verification	QC Inspector
Doc/Data	1	Dute	эсер	Qty		or Non comormance	+-	iici Liig	Desc	ription	Date	Vermeution	QC IIISPECTOI
Equip/Tooling	_						ŀ						
Operator	Г											İ	
Material												]	
Setup			•										
Other													
Process													
Supplier													
Training							1						
Unapproved													l
							AUL	T CATE	GORY				
Landi		1			<del></del>	General		1			7	<del>[ -</del>	٦ .
	$\vdash$	Bending				Bend	<u> </u>	Grain			Ovalized		Pressure/Forced
	⊢	Centre No	ot Concer	tric to	o/s	BOM/Route	$\vdash$	Hardwa			Over/Under	<b></b>	Temperature/Cure
	$\vdash$	Cracks	· ·		<u> </u>	Broken/Damaged	-	1	on Incomplete	<u> </u>	Part Incorre	<del> </del>	Weld
	_	Crushed/	Crimped,		<u> </u>	Burrs	<u> </u>	1	ions Incomplete/	Unclear	Part Lost/M	issing	Wrong Stock Pulled
	<u> </u>	Cuffs			<u> </u>	Contamination	_	Mainte			Part Moved		
	<u> </u>	Heat Trea	-		<u> </u>	Countersink	<u> </u>	Mislabe		<u> </u>	Positioned \		<b>1</b>
		Inspection	n Strip in	Tube		Cut Too Short		Misread	İ		Power Loss,	'Surge	Other

Offset

Out of Calibration

Out of Sequence

Outside Dimensions

H:/FORMS/Quality Assurance\approved QA/NCRWO Rev G

Turning Sequence

Wave/Twist in Tube

Ripples in Bend

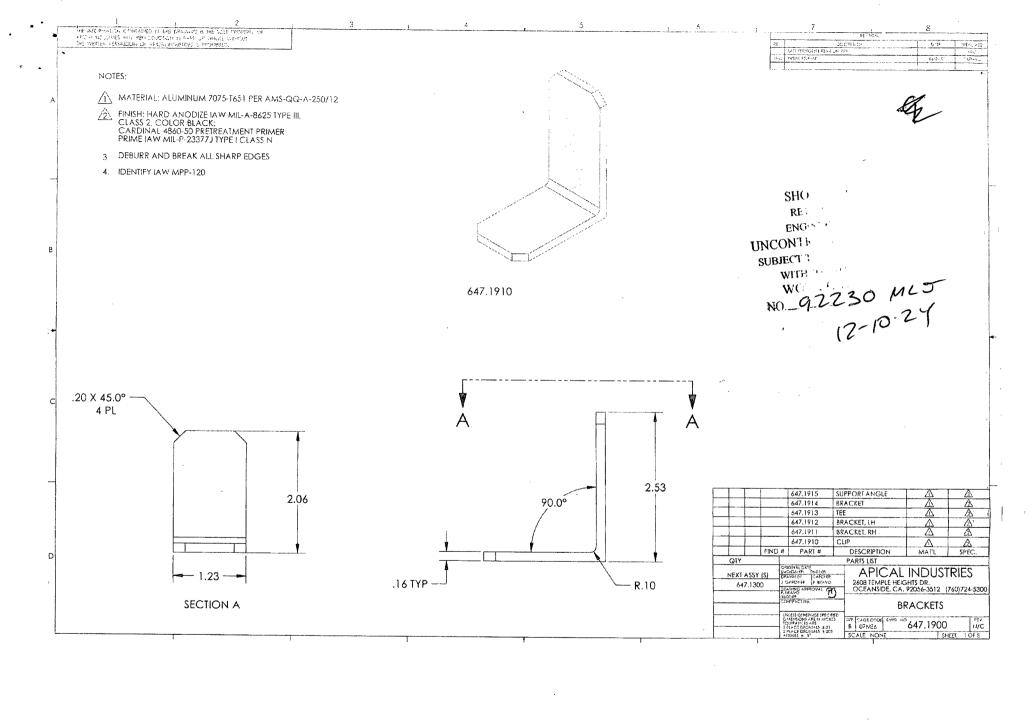
Torque Waves in Extrusion

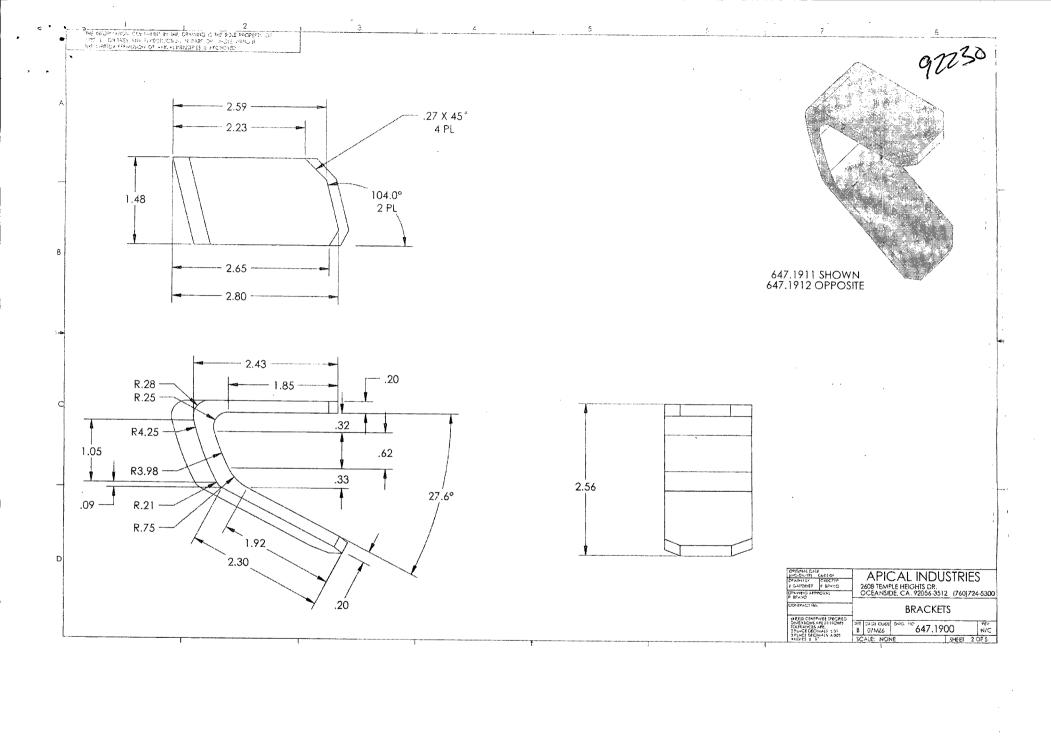
Drill Holes

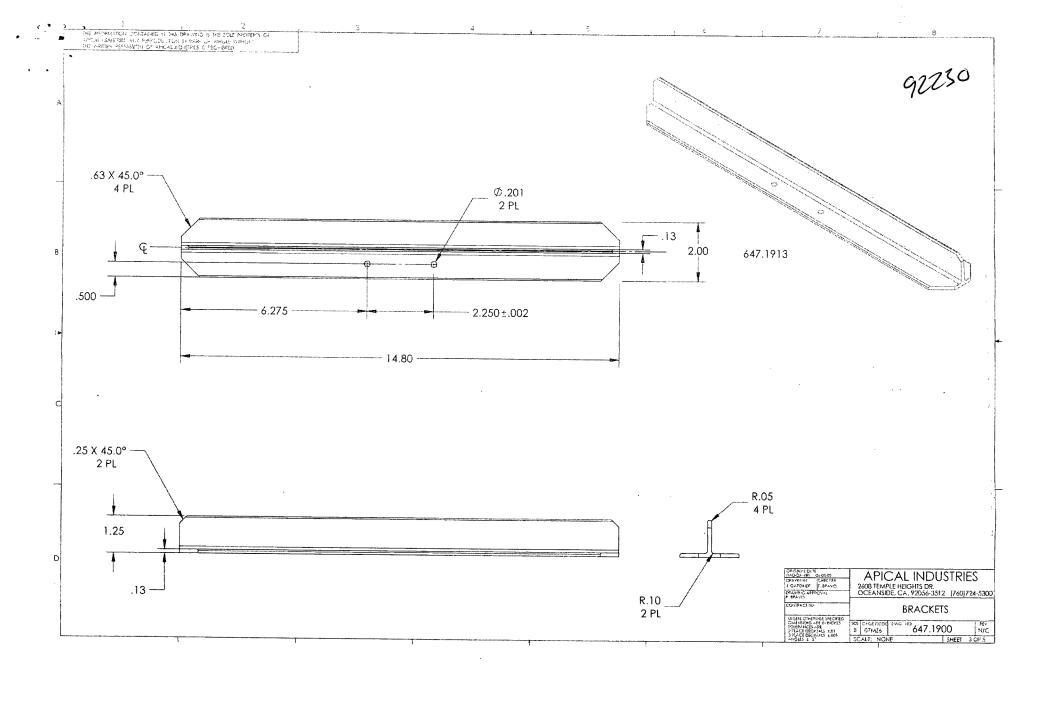
Drawing

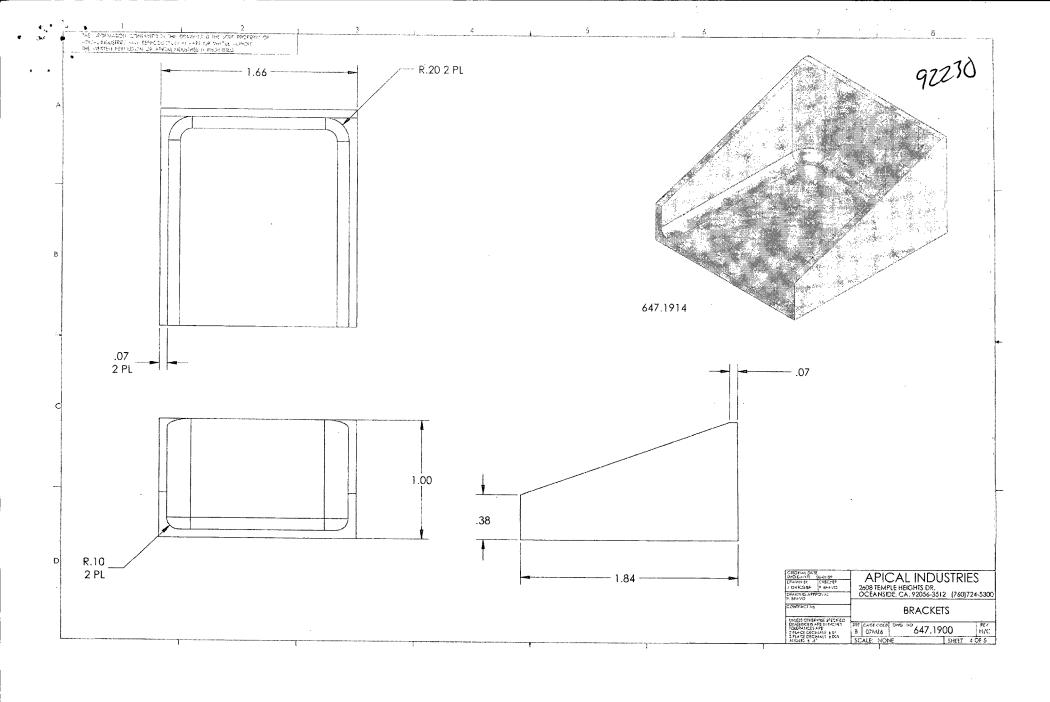
Finish

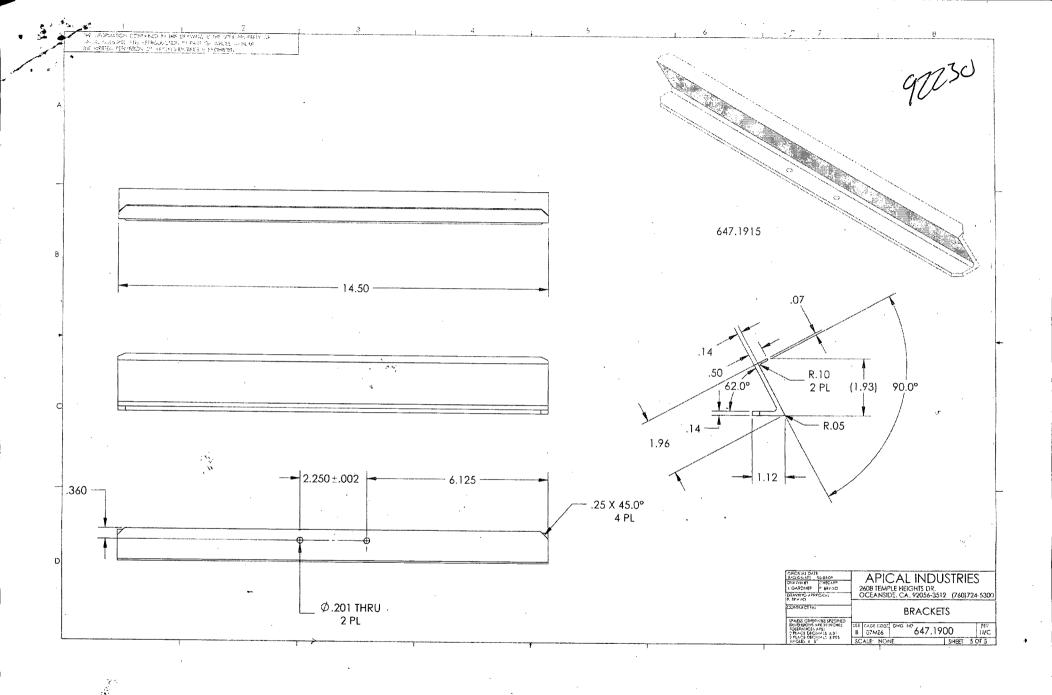
Folio











DART AEROSPACE LTD	Work Order: 97230	2
Description: Support Angle	Part Number: 6 ৭ 7 · 19 15	
Inspection Dwg: 647-1900 Rev: NC	Page 1 of	1

## FIRST ARTICLE INSPECTION CHECKLIST

Drawing Dimension	Tolerance	Actual Dimension	Accept	Reject	Method of Inspection	Comments
14.50	工,010	14.502	_		31006	Height Grunge
6,175	±.005	6.127			enc oz	
, 360	±.005	1363			RA76	Very
2,250	+ .002	2.252	t		RAZ 6	
0.201	4.004	0.201	<u> </u>		RAZE	
•						
	,					
	·					
						4

Measured by:	20 1	Audited by:	and	Preliminary Approval:	
Date: 12-	12-18	Date:	12/12/19	Date:	

Rev	Date	Change	Revised by	Approved
E	10.04.14	Added preliminary approval	KJ	

11:11



A.T.G. Industries Inc. 731, rue Industrielle Rd. PLATING DEPARTMENT Rockland, On K4K 1T2 Canada

Ph: (613) 446-4544 Fax: (613) 446-4556

## Pack List

Number: 62213

Date: 13-Feb-13

То

DART AEROSPACE LTD 1270 ABERDEEN ST. HAWKESBURY, ON K6A 1K7 Canada

Ship To

DART AEROSPACE LTD 1270 ABERDEEN ST. HAWKESBURY, ON K6A 1K7

Canada

Ph: 613-632-5000

711. 013-032-3	200 Fax: 613-632-118	5	Ph: 613-632-5200	Fax: 613-632-1185	
Terms		Ship Via			
Quantity	Description				
1	Part: ASST		Rev:		
lot	5 PCS D3299-1 12 PCS D3299-5 8 PCS D3299-7 16 PCS 647.1710 4 PCS 647.1711 5 PCS 647.1913 10 PCS 647.1913 12 PCS 646.3610 HARD ANODIZE BLACK MIL-A-8625 TYPE III CLASS 2				
	32 PCS 647.2511 PASSIVATE PER QQ-P-35 Job: 20130091	PO: PO19017	Line:		
	Certificate of C  A.T.G. Industries certifies that all item with all requirements, specifications a  ISO 9001: 2008 R ATG SALES-2010  DATE: 13/2//3  CERTIFIED SIGNATURE:	ns in this shipment are in and drawings referenced EGISTERED	n conformance I in the purchase order.		